

Readme description of files associated with “Detectors – the ongoing revolution in scanning transmission electron microscopy and why this important to materials characterisation” by Ian MacLaren, Thomas MacGregor, Christopher Allen, Angus I. Kirkland

Figure 1 files (Variable angle annular dark field):

File	Description
142311_VAADF_fig.ipynb	Main python notebook for plotting figure 1
binned_diff_200keV_CLA40um_6cm_15Mx_scan_array_253by255_diff_plane_128by128_.hdf5	Raw data file of 4D STEM data
HOLZLMNO radial integration.ipynb	Centre finding and azimuthal integration
142311_diffbin_radial.hspy	Azimuthally integrated 4D STEM file

Figure 2 files (HOLZ STEM)

14_LCMO_LSAT_figure.ipynb	Main python notebook for plotting figure 2
14LCMOLSAT.hdf5	Raw 4D STEM data file
14LCMOLSAT_radialplot.ipynb	Centre finding and Azimuthal integration
14_LCMO_LSAT_radial.hspy	Azimuthally integrated 4D STEM file
InnerLZFitter.py	Fitting script for inner Laue Zone
OuterLZFitter.py	Fitting script for outer Laue Zone
14_LCMO-LSAT convert model parameters.ipynb	Notebook to convert the fitting results to arrays for plotting
PlaneModulation.xlsx	Data file for plane spacing modulation from J E Kleibeuker et al., NPG Asia Mater. 9 (2017) e406
14_HAADF_intensity.hspy	HAADF intensity calculated from 14_LCMO_LSAT_radial.hspy

Figure 3 files

142311MAADF.hspy	MAADF image calculated from 142311_diffbin_radial.hspy used for the analysis
142311MAADF_atomap.ipynb	Python notebook used for the calculations and generating Figure 3